

Application No.:10/782,574

Docket No.: JCLA12196

In The Claims:

Please amend the claims as follows.

1. (currently amended) An optical projection system, capable of receiving a first light beam, a second light beam, and a third light beam, the projection system comprising:

a color-combination prism, having a first surface, a second surface and a third surface, allowing the first, second and third light beams to respectively enter the first, second and third three surfaces of the color-combination prism, so as to form a mixed beam to emit out from another surface;

a projection lens set, for receiving the mixed beam for projection; and
~~each of the light beams comprising:~~

~~a liquid crystal reflection panel; and~~
~~a first wire grid polarizer (WGP), a second WGP and a third WGP, for~~
~~respectively receiving and polarizing the first, second and third light beams and respectively~~
~~reflecting the polarized beams to a first liquid crystal reflection panel, a second liquid crystal~~
~~reflection panel and a third liquid crystal panel, wherein the first, second and third liquid crystal~~
~~reflection panels are respectively positioned substantially parallel to the first, second and third~~
~~surfaces of the color combination prism, and wherein the first, second and third liquid crystal~~
~~reflection panels respectively receive the polarized light beams from the first, second and third~~
~~WGPs and reflect polarized light beams to the first, second and third surfaces of the color~~
~~combination prism;~~

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~~wherein the liquid crystal reflection panels are parallel to the corresponding entering three surfaces, wherein before the light beams enter the color combination prism, the polarized light beams are reflected by the WGP onto the liquid crystal reflection panels and then the liquid crystal reflection panels reflect the light beams respectively with another polarization state, so as to pass through the WGP and propagate directly toward the color combination prism.~~

2. (currently amended) The optical projection system of claim 1, wherein each of the first, second and third WGP allows a light component with a first polarization state to pass, and reflects a light component with a second polarization state.

3. (currently amended) The optical projection system of claim 1, wherein each of the first, second and third liquid crystal reflection panels includes a plurality of pixels, whereby an incident polarization state with respect to each of the pixels can be changed to the desired polarization state, so as to transmit the WGP.

4. (currently amended) The optical projection system of claim 3, wherein the first, second and third liquid crystal reflection panels provide an image pattern by changing the polarization state.

5. (original) The optical projection system of claim 1, wherein the color-combination prism includes an X-cube.

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6. (original) The optical projection system of claim 1, further comprising a first color splitter, to split a light source into a first primary color beam and a color mixing beam.

7. (original) The optical projection system of claim 6, further comprising a second color splitter, to split the color mixing beam into a second primary color beam and a third primary color beam.

8. (currently amended) The optical projection system of claim 1, wherein a polarizer is disposed in a light path of each of the first, second and third light beams includes a polarizer, whereby the light beams are respectively first reflected to the first, second and third WGPs.

9. (currently amended) The optical projection system of claim 1, wherein each of the first, second and third liquid crystal reflection panels includes a liquid crystal on silicon (LCOS) panel.

10. (currently amended) An optical projection method, for receiving a first light beam, a second light beam, and a third light beam and projecting, the method comprising:

providing a light source;
splitting the light source into different color light beams;
leading each of the color light beams to respectively enter a wire grid polarizer (WGP), which polarizes the light beam and reflects the polarized light beam to a liquid crystal reflection panel, wherein each of the liquid crystal reflection panel has a plurality of pixels;

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controlling each of the pixels of the liquid crystal reflection panel to have a polarization state with respect to the pixels for the reflection the polarized light beam received from the WGP; and

respectively leading the light beams reflected form the liquid crystal reflection panels to directly transmit to the respective WGP and corresponding surfaces of a color combination prism and combining where the light beams are combined into a mixed light beam, wherein each of the liquid crystal reflection panels is positioned substantially parallel to the corresponding surface of the color combination prism.

11. (original) The method of claim 10, wherein the WGP allows a light component with a first polarization state to pass, and reflects a light component with a second polarization state.

12. (original) The method of claim 10, wherein the liquid crystal reflection panels includes a liquid crystal on silicon (LCOS) panel.

13. (original) The method of claim 10, wherein the step of leading the light beams reflected from the liquid crystal reflection panels includes using a color-combination prism to obtain the mixed light beam.

14. (original) The method of claim 13 wherein the color-combination prism includes an X-cube.